

AIDS in Lancaster County, Part II

Risk Factors and Populations Affected

This issue of Epi Info continues a discussion begun by *AIDS in Lancaster County, Part I*. That issue traced the level of AIDS incidence over time and its variation by age, gender and race. This issue explores sources of HIV exposure among individuals who have been diagnosed with AIDS, describes how these exposure patterns differ by gender, age and race, and summarizes incidence patterns which are changing the demographic portrait of HIV infection and AIDS.

Summary

Our data indicate that in Lancaster County, as in the nation as a whole, AIDS remains a disease that disproportionately affects homosexual men. However, comparisons between AIDS incidence and preliminary HIV incidence data strongly suggest that exposure and disease risk is increasing among Lancaster County women, users of injected drugs, racial/ethnic minorities, and heterosexuals. Teen incidence rates for other sexually transmitted diseases also raise concerns about HIV risk among youth. How these increased HIV risks may affect AIDS rates in the future is uncertain, given recent advances in treatment which delay onset of AIDS, and the likelihood that many of those at risk will not have access to high-cost treatments.

This report is based on AIDS incidence data for Lancaster County from 1985 to 1995, with comparisons to preliminary HIV incidence data where applicable. In 1995, HIV became a reportable

Acquired Immunodeficiency Syndrome (AIDS) is the late clinical stage of infection with Human Immunodeficiency Virus (HIV). AIDS is typically characterized by a group of HIV-related opportunistic infections and damage to the immune and other organ systems. AIDS affects all races, ages and classes, in virtually every nation. AIDS was first reported in Lancaster County in 1985; 122 cases were reported from 1985 to 1995.

disease in Nebraska. Until then, only AIDS had been reportable. Although preliminary, HIV data is referenced in this issue in an attempt to provide insight to current HIV incidence and future AIDS patterns. It is important to note that the HIV data set does not include all cases diagnosed since 1995 or from the period before HIV became reportable. Nor does it include persons infected with HIV who have not been tested.

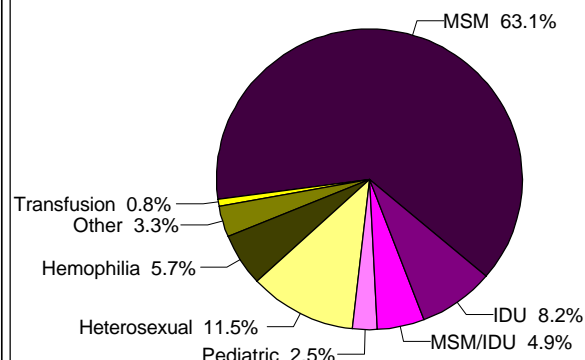
Individuals can be exposed to HIV in several ways. As shown in **Figure A**, the risk categories include men who have sex with men (MSM), injected drug use (IDU), hemophilia, heterosexual contact with infected individuals, blood transfusions, and pediatric cases where HIV is acquired from the mother.

Major Exposure Risks in Lancaster County

In Lancaster County, as in the U.S. as a whole, AIDS is far more likely to affect men who have sex with other men (MSM) than any other group (Figure A).

Over two-thirds of all individuals diagnosed with AIDS in Lancaster County from 1985 to 1995 had MSM as their main exposure risk (68.0%). These cases include 4.9% of the total that were classified as both MSM and injected

Figure A: AIDS Cases by Primary Exposure
Lancaster County, 1985-1995



drug use (IDU). MSM was the main exposure risk for 70.7% of males with AIDS.

When compared to AIDS cases, preliminary HIV data show a smaller percentage of incident cases attributed to MSM (43.8%). However, 23.8% of the HIV cases did not indicate an exposure source (as compared to 3.3% of AIDS cases that were not classified by exposure risk). In the nation as a whole, MSM was the primary exposure risk for 75.6% of all individuals diagnosed with AIDS through 1995 (Centers for Disease Control and Prevention, *HIV/AIDS Surveillance Report*, vol. 7, no. 2).

Injected drug use (IDU) was the second-largest exposure risk for those diagnosed with AIDS in Lancaster County, comprising 13.1% of cases, including 8.2% IDU alone and 4.9% also classified as MSM. **In preliminary HIV data, IDU comprised over one-fifth (22.5%) of incident cases in Lancaster County.** Nationally, IDU was the main exposure risk for 31.5% of AIDS cases through 1995.

Heterosexual contact with infected individuals was the third most significant exposure risk (11.5%) for those diagnosed with AIDS in Lancaster County (14 individuals). Three of these individuals were diagnosed from 1985 to 1991, while the remaining cases (88.5%) were diagnosed since 1992. A similar percentage (12.5%) of HIV cases reported in Lancaster County were attributed to heterosexual exposure. In the U.S., heterosexual exposure accounted for 8% of AIDS cases through 1995.

Hemophilia disorder was the primary exposure risk for 5.7% of Lancaster County individuals with AIDS.

Figure B: AIDS Exposure by Sex Lancaster County, 1985-1995				
Exposure to AIDS	Males	Percentage of Total Males	Females	Percentage of Total Females
MSM	77	70.7%	.	.
IDU	8	7.3%	2	15.4%
MSM/IDU	6	5.5%	.	.
Hemophilia	7	6.4%	.	.
Heterosexual	5	4.6%	9	69.2%
Transfusion	1	0.9%	.	.
Pediatric	2	1.8%	1	7.7%
Other	3	2.8%	1	7.7%
TOTAL	109	100.0%	13	100.0%

Figure C: AIDS Exposure by Age Lancaster County, 1985-1995									
Exposure to AIDS	0-14 Years	15-19 Years	20-24 Years	25-29 Years	30-34 Years	35-39 Years	40-44 Years	45 + Years	TOTAL
MSM	.	.	5	8	21	21	14	8	77
IDU	.	.	1	3	1	4	1	.	10
MSM/IDU	.	.	1	1	2	1	1	.	6
Hemophilia	.	.	2	1	2	.	1	1	7
Heterosexual	.	.	1	5	3	3	1	1	14
Transfusion	.	.	.	.	1	.	.	.	1
Pediatric	3	.	.	.	.	.	.	.	3
Other	.	.	.	.	1	1	1	1	4
TOTAL	3	0	10	18	31	30	19	11	122
% of MSM	0%	0%	60.0%	50.0%	74.2%	73.3%	78.9%	72.7%	68.0%
% of Heterosexual	0%	0%	10.0%	27.8%	9.7%	10.0%	5.3%	9.1%	11.5%

Pediatric cases (younger than 13 years of age) comprised 2.5% of AIDS cases, while a small percentage (0.8%) of individuals were exposed through blood or tissue transfusion. Similar percentages are incicated in the preliminary HIV data.

Incidence Among Women and Youth

Although AIDS primarily affects homosexual men, in recent years there has been increased concern about incidence among women and youth. **One in ten Lancaster County individuals with AIDS (10.7%) were female,** with three-fourths (76.9%) of these diagnosed after 1990. **The female proportion of cases was twice as high for preliminary HIV data (22.5%).** The most likely source of exposure for most females with AIDS (69.2%) was heterosexual contact (*Figure B*), followed by injected drug use (15.4%).

The majority (80.3%) of AIDS cases in Lancaster County have been diagnosed among individuals 25 to 44 years old (*Figure C*). **Nearly one-quarter (23%) of AIDS cases were diagnosed among individuals 20 to 29 years old.** More than twice as many cases occurred among those 20-29 years old in 1992-1996 (24 cases) as in 1987-1991 (10 cases). If we assume the 8 to 10-year period estimated for an average HIV case to develop into full-blown AIDS, then **the majority of 20- to 29-year-olds with AIDS likely acquired HIV while they were teenagers or adolescents.**

To date, only 5% of HIV incidence reports are for teens. This suggests that young people with HIV may not receive early testing. In the Lancaster County 1997 Youth Risk

Behavior Survey, 38% of sexually active high school students reported that they did not use a condom the last time they had sex. Incidence rates for sexually transmitted diseases such as gonorrhea, chlamydia, and genital warts are highest among the teenage population. This data provides additional cause for concern about the high risk sexual behavior of youth in Lancaster County and their potential for HIV infection.

The percentage of AIDS cases classified as MSM or MSM/IDU is higher among individuals in older age groups, comprising 53.6% of those with AIDS in the 20 to 29 year age group, 73.8% in the 30 to 39 year age group, and 76.7% in the 40 years and above age group. **The percentage of AIDS cases traced to heterosexual exposure comprised one in four (27.8%) persons diagnosed at 25-29 years, as compared with 10% or fewer of those in all other age groups.**

Incidence Among Ethnic/Racial Minorities

AIDS disproportionately affects the minority population, comprising nearly 16% of AIDS cases and 20% of HIV cases, but only 6% of the general population (Figure D). In Lancaster County, the majority of White (67.0%) and Hispanic (71.4%) individuals with AIDS reported exposure through MSM. **Black individuals were less likely to report MSM (27.3%) and most likely to report primary exposure risk through heterosexual contact (45.4%) (Figure E).** Exposure to

Figure D: Comparison of Race/Ethnicity:
AIDS cases, HIV cases, and the General Population
Lancaster County, 1985-1995

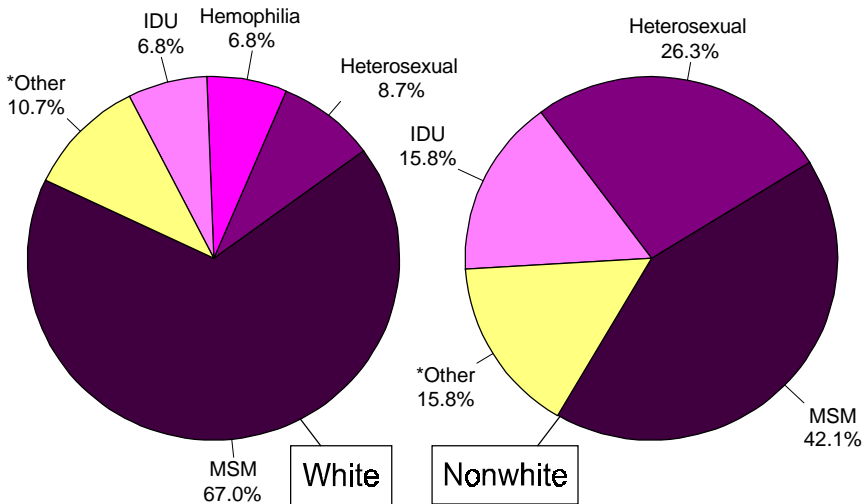
Race/Ethnicity	AIDS cases	HIV cases	General Population (1990 Census)
White	84.4%	80.0%	93.9%
Black	9.0%	11.3%	2.1%
Hispanic	5.7%	6.3%	1.8%
Native American	0%	1.3%	0.5%
Other	0.8%	1.3%	1.7%
Non-white Total	15.6%	20.0%	6.1%

AIDS through MSM/IDU, transfusions of blood or tissue, hemophilia disorder, and pediatric cases occurred only among the White population.

Future AIDS Incidence in Lancaster County

In summary, Lancaster County AIDS incidence appears to have increased in recent years among females, youth, and those with heterosexual contact. HIV incidence data further indicate that females, teens and adolescents, racial/ethnic minorities, those who inject drugs, and those who engage in heterosexual sex are increasingly at risk for HIV exposure in Lancaster County. Increased community awareness, prevention and treatment of HIV/AIDS among these populations is needed -- without sacrificing a continued emphasis on AIDS prevention among the homosexual population.

Figure E: AIDS Exposure by Race
Lancaster County, 1985-1995



*Other includes pediatric cases, exposure due to transfusion, exposure from MSM/IDU, and unknown exposures.

How these HIV trends will affect future AIDS incidence is uncertain. Recent treatment advances have increased the likelihood that AIDS onset will be delayed or suppressed for many with HIV. However, given the expense of these treatments, along with the current barriers to medical care, there is a danger that many of those most at risk will not have access to these promising treatments. If such a situation were to persist, AIDS in Lancaster County could increasingly affect a broader base of the population, including women, ethnic/racial minorities, and other economically disadvantaged populations.

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